

# CHAMBERS'S JOURNAL

OF

POPULAR

LITERATURE, SCIENCE, AND ART

Fifth Series

ESTABLISHED BY WILLIAM AND ROBERT CHAMBERS, 1832

No. 395.—VOL. VIII.

SATURDAY, JULY 25, 1891.

PRICE 1½d.

## A NOTABLE HOROLOGICAL INVENTION.

THE Naval Exhibition now open in London contains many interesting relics of other days. To the makers and users of nautical instruments, and to horologists especially, there are exhibits which have a peculiar interest attaching to them. Among these is John Harrison's famous 'Time-keeper,' in view of the unique character of which a few remarks relative to it and its maker at this time will be of special interest, the more so, perhaps, that little information of either of them seems to be possessed by the general public.

It is well known that every ocean-going vessel is equipped with the means of enabling those in charge to direct its course, and also to determine its geographical position at sea, and that one indispensable factor in the latter problem is a time-keeper, or, as it is otherwise called, a ship's chronometer. This, however, was not always so. The route of the earlier navigators across the trackless ocean was not by any means the 'beaten track' it is now. The time has been when a deviation of a few score miles more or less in an ocean voyage was not considered a bad course. Horological science, though of ancient origin, had not, previous to the later half of the seventeenth century, produced any portable timepiece approaching anything like exactness, the erratic performances of all then existing rendering them quite useless for any practical purposes of navigation.

Though Harrison's 'Time-keeper' marked the commencement of a new epoch in horological productions, it is open to question if, without the labours of those who preceded him, his fame as a watchmaker would have been what it is. This is not to be understood as depreciatory of his talents as a mechanic and scientist, for these were without doubt unsurpassed by his contemporaries, but merely as an example of the great law of development.

With a compass, to denote the Poles, and the celestial spheres for his latitude—or distance

north or south from any given place—the ancient mariner, previous to the discovery of America, seems to have had all that he required; at any rate, it was not till after this event any steps in quest of additional methods are recorded.

The discovery of the New World in the fifteenth century soon caused the problem of the longitude at sea—or distance east or west of any given place—to become a very important question amongst transatlantic voyagers, and forthwith great rewards were offered from time to time by the Governments of various maritime nations for the invention of a method or construction of an instrument to effect that object. Some most absurd projects were offered by those whose learning ought to have guarded them better. Alchemists and other visionaries of that day sought with crafty schemes to obtain the rewards. But the true solution of this great problem could only come from the sound deliberations of the mathematicians and astronomers, who recommended a reliable timekeeper for this purpose. So far so good; but theory without means for its practice availed nothing.

Horology in the sixteenth century had no instruments of sufficient accuracy to offer, and at that time not the least indications existed that it ever would. The Spanish Government for a period of over one hundred years offered and expended vast sums of money in the pursuit of determining the longitude at sea, till about 1626, when they appear to have abandoned the attempt. The Dutch, also, who possessed in those days a splendid fleet on the high seas, and were correspondingly interested, were prominent in the attempt, and at one time offered thirty thousand guilders. France, too, joined in the same search, and offered great sums. These continued rewards elicited many ingenious schemes; but none of them possessed sufficient merit.

But the dawn of better things was at hand, and a step taken in 1656 was the prelude to a series of experiments, which a hundred years later culminated in a success as complete as it was astonishing. This step was the attachment of the

pendulum to the clock by the Dutch philosopher Huygens, and was an immense acquisition to horology, at once giving it a place in the exact sciences such as it had not before held. The clock thereupon became in many astronomical calculations as indispensable as the telescope, and every practical astronomer has since then become more or less of a horologist.

The next important advance was the invaluable invention, about 1660, of the watch balance-spring, by Dr Robert Hooke, the son of a watchmaker in the Isle of Wight, and a most ingenious mechanic. He was also the author of other valuable inventions and improvements; notably the 'anchor' escapement for clocks, now in common use, the germ of the duplex escapement for watches, and some ingenious tools for the making of astronomical instruments.

Previous to the year 1691, watches had only the hour-hand, a disadvantage which was removed by Daniel Quare of London, who added the minute-hand, an improvement apparent to all.

Nine years later, the horizontal escapement in its perfected state, by George Graham, F.R.S., the pupil and colleague of the renowned Thomas Tompion, and sometimes styled the 'Father of English Clockmakers,' was made public; and if not the most accurate, is still made on account of its economy in almost countless numbers. Till the appearance of this escapement in 1700, there was no other in existence—with the exception perhaps of some obscure experiments—than the old 'vertical,' now known as the 'verge' escapement. In the same year the ingenious device of jewelling the parts most subject to wear was introduced into this country by 'M. Facio, a native of Geneva, who came to Paris with this art as a secret; but not being well received, either by the Duke of Orleans, at that time Regent of France, or by the watchmakers there, he repaired to London with it, which was at that time a school where the art of watchmaking was more cultivated than at Paris.'

With these explanations, we now come to the year 1714, when the English Government appointed a Commission for the purpose of investigating the longitude question. One of the members of this body, which was known as the Board of Longitude, was the celebrated Sir Isaac Newton, who prepared an exhaustive paper on the subject, and endorsed the old opinion that a 'true time-keeper' would solve the question. This recommendation was laid before Parliament, and shortly afterwards there was published 'An Act for providing public reward for such person or persons as shall discover the longitude at sea.' Sir Isaac, who was himself deeply interested in horology and in touch with all the latest improvements, was evidently sanguine that a true time-keeper could be made, provided the incentive was strong enough to induce any one to devote his time and means to that end. So the reward

was fixed at ten thousand pounds if it defined the longitude to within one degree; fifteen thousand to within two-thirds; and twenty thousand to within half a degree—these distances being respectively, sixty, forty, and thirty geographical miles. At this time, there were then living several eminent horologists, whose well-known abilities, one thinks, might have induced them to claim this honour; yet there is no authentic record of any application till fourteen years after it was first offered.

John Harrison, who invented and made the time-keeper which gained this reward, was born at Foulby, near Pontefract, in Yorkshire, in 1693. Of his early life little seems to be known, further than that he assisted his father, who was a joiner and cabinet-maker; and in addition to this occupation, undertook the repairing and cleaning of clocks and watches. From this fact, it is no doubt traceable that his son John had his great mechanical abilities directed into the channel by which he in after-years made himself famous. When quite young, he seems to have been an enthusiastic worker amongst clocks and watches, and is said to have made some of the former with 'frames of wood.' Although this indicated his constructive and imitative faculties—which in mechanics are indispensable—yet his fame rested on higher attainments than these alone, for, in addition to them, he possessed inventive powers of the highest order, along with a logical mind; and as a scientist in all that related to horological philosophy, his productions are a monument to his talents.

The mere making of the separate parts of a watch or clock does not constitute a time-keeper. Each article is subject to its own laws, which were only understood by a long series of observations and experiments. The expansion and contraction of metals through changes in temperature, the varying fluidity of the lubricant, magnetic disturbances, irregular supply of force to the escapement, want of isochronism in the pendulum and balance-spring, were all elements of disturbance, and to counteract these was the life-work of John Harrison.

It is beyond the scope of this article to give a technical description of his inventions; the principles involved, and his intricate mechanism, make even the attempt at anything like lucidity a hopeless task; and in view of this, the remarks thereon must needs be confined to their popular aspect. Harrison, who was twenty-one years of age when the decision of the Board of Longitude was made public, was then, or soon afterwards, engaged in devising some means to counteract the expansion and contraction of metals by heat and cold, and his efforts were crowned with success by the production of his 'gridiron compensation pendulum.' The reward offered seems to have directed his attention to remedy the same defect in a watch, which defect, in long voyages embracing wide ranges of temperature,

was one of its greatest failings. With this view, then, he prepared drawings of a scheme, including an original escapement, took the same to London, and there showed it to Dr Halley, who was then Astronomer-royal. In principle, the invention depended on a laminated bar of brass and steel fixed at one end, the free end carrying two curb pins embracing the balance-spring; and according as the bar shrunk or expanded, it regulated the length of the spring. It acted, in short, as an automatic regulator. It has since been entirely superseded by more exact methods.

Dr Halley, seeing there was something in the invention, gave its author an introduction to the practical George Graham, who advised him, before applying to the Board for assistance, to get his machine constructed. This was in 1726; but it was not till 1735 that any real success attended his efforts. A time-keeper which he then tested against motion at sea in a river-boat on the Humber answered his expectations so well, that it was taken on a voyage to Lisbon, thus testing its powers of resisting both motion and temperature. The experiment was attended with most gratifying results. For this, the Board advanced him five hundred pounds; and he was advised by them to make another, but on a smaller scale. In 1739 he appeared before the Board with his second instrument; but, for some reason or other, it did not meet their approval. After the lapse of two years he was back before the Board with his third time-keeper, much smaller, and greatly improved; and for this he received the gold medal of the Royal Society.

In 1758 Harrison applied to the Board of Longitude for permission to have his instrument officially tested by sending it to sea in a vessel bound for a voyage that would try its capacities in all conditions. After a considerable and quite unnecessary delay, this was granted; and on the 18th of November 1761, William Harrison, the inventor's son, was despatched with it to Jamaica in the good ship *Deptford*. After being eighteen days out, the vessel, according to the then usual method of determining the longitude, was found to be thirteen degrees fifteen minutes west of Portsmouth; whilst, according to Harrison's time-keeper, it was stated to be fifteen degrees nineteen minutes, a difference which the ship's navigators were not disposed to admit. Young Harrison, however, having confidence in his 'watch,' stoutly stood by its accuracy, and maintained that a certain island would be sighted next morning if it was properly defined on the chart. The captain, to settle the dispute, steered a course necessary to that end; and next morning, to his chagrin and Harrison's joy, the 'watch' was up to time. The same results were obtained as island after island was passed; and on their arrival at Port Royal, after a voyage of over two months, the time-keeper was found to be five seconds slow; and on its return to England, after being away over five months, its error was not a minute and a quarter.

Now, according to the Act of 1714, Harrison was justly entitled to the full reward of twenty thousand pounds, as his instrument had defined the longitude to a point considerably less than the least distance specified by that Act. But Dr Maskelyne, who was afterwards the Astronomer-royal, through some freak, would not consent

to its being paid; besides, some of the other members of the Board thought this astonishing accuracy was merely accidental. It was at length agreed to give an advance of two thousand five hundred; but on Harrison justly remonstrating, this sum was doubled, and the balance promised when all doubts were at rest.

A second voyage was then directed to be made; and on the 24th of March 1764, William Harrison again left the shores of his native land on board the man-of-war *Tartar*, bound to Barbadoes. Every precaution was taken this time that foresight could suggest to prevent misunderstanding. The instrument was placed under three locks and keys—one being kept by Harrison, another by the captain, and the other by the navigating officer, so that, when it required winding, all three were bound to be present. On its return in September of the same year, its performance was found to have quite realised the expectations of its maker. The Board then paid over another five thousand pounds, withholding the balance till he had given full instructions to enable it to be reproduced. Larcum Kendall, who had been an apprentice of Harrison's, accomplished this; but he refused to commence without a sum of four hundred pounds being paid to him in advance.

After several years of delay and many acrimonious discussions with the Board, John Harrison finally in 1767 received the balance of the twenty thousand pounds. He was then in his seventy-third year. His time-keepers, which are still in existence, are the property of the Government, and are officially in charge of the Astronomers-royal in Greenwich Observatory.

## DUMARESQ'S DAUGHTER.

### CHAPTER XXXIII.—A NEW SUITOR.

TIME marched on, as indeed it often does in this prosaic world of ours; and Psyche's life at the Pension des Orangers grew daily more and more like her life at Petherton. The first flush of freshness in the African world wore gradually away; and even as it disappeared, Psyche's eyesight returned once more to something the same deplorable condition as at the Wren's Nest. Only, a general dimness began at last to supervene. Instead of periods of occasional loss of sight, interspersed with periods of perfect vision, Psyche was conscious of a constant decrease in visual power, so that she only saw with clearness and distinctness now when she made a definite effort of attention towards any particular object. The fact was, the change was but evanescent. The cause of her malady still remained untouched. Her sight was failing.

She passed much of her time all those days with Geraldine Maitland: much also with Cyrus, Sirena, and Corona. Geraldine, indeed, did all she could to throw the four together. The girls, she thought, were nice lively companions for poor broken-hearted Psyche: they roused and stimulated her: and Geraldine even cherished some faint hope that Cyrus's good-nature and kindness

of heart might at last engage Psyche's passing interest. For Geraldine had a genuine affection—of a sort—for Cyrus: knowing his profound admiration for 'high-toned' Englishwomen, she would have been delighted—if only she could have handed him over to Psyche.

With this end in view, she had concocted from the beginning a little scheme of her own to create in the genial young American's mind an interest in the pretty and shrinking English girl. Before the Dumaresqs' arrival, she had arranged with Cyrus that he should pay nearly one half their bill at the *pension*, in the utmost secrecy; and so had created a proprietary feeling by anticipation towards both father and daughter in the generous Westerner's chivalrous soul. For Cyrus, though engaged, like all the rest of Cincinnati, in the fluctuating concerns of the wholesale pork market, had a nature as tender as any English gentleman's: and his feeling of protection towards Psyche might easily ripen under these peculiar circumstances into one of a far more intimate and personal kind.

As for Geraldine, her own attitude towards her American admirer was very peculiar. She liked Cyrus immensely; but, as Cyrus himself rightly divined, the money alone stood in the way. She could never endure the world should think she had sold herself for Cincinnati gold. A little wholesome opposition, indeed, on Mrs Maitland's part might have worked wonders for Cyrus's chance of success; but Mrs Maitland, sharp woman of the world as she was by nature and training, was yet not quite sharp enough to perceive that opportunity for carrying her point. Her tactics had less of finesse about them than of sheer persistence. She saw her end clearly, and made for it with most unwomanly directness by what seemed to her the plain straight path. And Geraldine, who could be led but could not be driven, found her mother's advocacy of Cyrus's claims a considerable factor against the honest and manly young American's chances.

A month or two had passed, and Sirena sat one day in the garden on the hillside slope under the pleasant shade of a drooping pepper-tree. The full African sun was pouring down his splendour on terraces rich with rose and geranium. Tall irises flaunted their beauty in the air, and bees hummed busily around the heavy-scented loquat trees. Psyche and Corona were seated on the bench in the tennis court below, watching a set between some others of the visitors: for the irrepressible Briton, wherever he goes, *must* have his tennis lawn. Sirena laid down her novel with a yawn. A shadow from behind fell across the path. She looked up suddenly. It was Haviland Dumaresq.

The old man seated himself by her side with a fatherly air. He had learned to like Sirena by this time; she was always so kind to his precious Psyche. When Psyche's eyes were most seriously affected, it was Sirena who came to her bedroom to read to her: when Psyche couldn't see to guide a pen, it was Sirena who helped her to write her letters. Haviland Dumaresq could pardon for that even Sirena's name; no siren she, indeed, but a simple-hearted, kindly-natured, rough, self-satisfied, self-sufficing Western girl. Besides, was

she not Cyrus Vanrenen's sister; and were not Haviland Dumaresq's ideas for the moment beginning vaguely to fix themselves upon Cyrus Vanrenen's future? Anything on earth, now, to turn the current of Psyche's mind into fresh directions!

'My darling grows no better, Miss Sirena,' he said pathetically, as he glanced at Psyche sitting with that settled resigned air of hers on the bench far below. 'I had hoped much from this trip to Africa. Every day I stop here my hopes grow slenderer. As the novelty palls, the evil increases. She's fading like a flower. I know not what next to try to rouse her.'

Sirena glanced back at him with tears in her eyes. 'Do you think she'll go blind, then, sir?' she asked anxiously.

'Unless we can change the set of her thoughts,' Dumaresq answered in a very slow voice, 'purely functional as the evil is, I begin to fear it. An effort would suffice to make her see as well as ever, to be sure; but she seems incapable even of making that effort. Her will-power's gone. She lacks initiative. She has nothing left to live for, I'm afraid, just now. I wish to God we could find something to interest her in life. At her age, such a want of living-power's simply unnatural.'

'That's so, sir,' Sirena answered, half afraid, for she could never quite conquer her instinctive terror of the famous thinker.

'You know the cause?' Haviland Dumaresq suggested tentatively.

'I guess so, in part,' Sirena answered with what might (for an American girl) be almost called timidity. 'Miss Maitland's enabled me to draw my own conclusions.'

Haviland Dumaresq paused for a moment, irresolute. Then he went on dreamily, in his half-soliloquising fashion: 'It would be a great thing, though, if we could make her take some living interest in something or somebody else, instead of leaving her to this perpetual brooding over her buried grief.'

'It would so,' Sirena assented eagerly.

Dumaresq started at the cordiality of this assent. Her tone, he felt sure, said more than her words. She had thought it over—thought it over before. Here surely was an ally—a ready-made ally. If only the current of Psyche's thought could be turned! It wasn't only for her happiness nowadays, alas! it was for her eyes, her sight, her health, her very life almost.

'Nothing will ever give her a chance now, I fear,' he said slowly, still fixing his gaze on Psyche in the distance, 'except the slow growth of a fresh affection. It would have to be slow: it would have to be long: it would have to be all begun from without: for Psyche herself, in her present frame of mind, would never begin it. She's lost the impetus. Her heart's too much bound up now in that unknown grave.—But if anybody should ever happen to fall in love with her, and to press his suit upon her by gentle degrees—she's young still—nature and instinct are all on her side—it isn't natural at her age to grieve for ever—well, I almost fancy, he might have a chance—he might yet prevail upon her.—And if, however slowly, Psyche could only be brought to feel that some new object in life was dawning on her horizon and growing up before



her, her eyesight, I believe, would at last come back. All the doctors are agreed as to that: all she needs now is power to make the effort.'

Serina looked up at him with a vague wistfulness. 'If Cyrus'—she began: then she broke off suddenly, appealed to herself at her own exceeding boldness.

Dumaresq interrupted her with a sudden return of his native haughtiness. 'Mr Vanrenen,' he said, drawing himself up as if he had been stung, 'is a very young man for whom I have slowly conceived—well—a certain regard, in spite, I will confess, of some initial prejudice. But I most assuredly didn't intend, in what I have just said, to allude either to him or to any other particular person. If you thought I meant to do so, you entirely misunderstood me. It is an inherent, perhaps an ineradicable, vice of the feminine mind always to bring down general propositions to an individual instance.'

He said it in his grand impersonal kingly manner, like a monarch in his own philosophic realm, dismissing for the moment the *pourparlers* of some friendly power on a matter affecting his daughter's interests. His condescension was so evident, indeed, that Sirena herself, unabashed wild Western American that she was, felt constrained to answer humbly in her smallest voice: 'I beg your pardon, Mr Dumaresq. I—I didn't know what I was going to venture to suggest would be likely to offend you.' She was awed by the solemn dignity of the old man's attitude. In her own heart, she felt tolerably sure he meant to hint, in his obscure way, that if Cyrus made love to Psyche, he, for his part, would have no serious obstacle of his own to offer. But she also felt that, penniless and aged as the great philosopher was, a cipher in the worldly society of rank and wealth, he still considered and knew himself a power in the world—a power of a kind that could hardly bear to stoop to the vulgar trivialities of Cincinnati pork-merchants. And he made Sirena recognise his position too. That frank and fearless young daughter of an irreverent dollar-worshipping Western republic yet recognised in her own heart, as she sat there that morning under the weeping pepper-tree, that the gray philosopher in the threadbare coat would be conferring an undoubted honour on her house if he were to admit, however grudgingly, and with whatever reserves, that Cyrus Vanrenen might conceivably pay his court unopposed to so great a lady as Haviland Dumaresq's daughter.

The old man rose, as if to conclude an interview that embarrassed him. Sirena rose too, and moved towards the court, where Psyche was sitting. At the self-same moment, Cyrus and Geraldine Maitland came in sight from the opposite direction.

Cyrus was in a humour particularly disposed to think and hear anything good of Haviland Dumaresq and his daughter; for in truth he had just been conferring a favour upon them. Geraldine had called on her weekly errand of paying the other half of Mrs Holliday's bill, for which Cyrus unobtrusively supplied the money. To him, it was nothing—less than nothing, for he was really one of the richest men in Cincinnati: if out of the superfluity of his wealth he could do anything to make Haviland Dumaresq or his daughter the happier, he was ready

with all good-will to do it, not letting his left hand know what his right hand was doing. Americans are more public-spirited in the use of their money than we are; and Cyrus took to himself no special credit for this graceful act. Society and the world, he had been told, owed Haviland Dumaresq an immense debt: and part of that debt, by the favour of circumstances, he, Cyrus Vanrenen, was privileged to discharge for it. It was one of the many advantages of wealth that money could so bring him into pleasing personal relations, however one-sided, with his natural betters.

Psyche, looking up, was dimly conscious of somebody approaching. She moved aside a little, and made room for the young man on the bench. Cyrus noted the natural courtesy with keen pleasure. She wanted him to sit beside her, then! And she so very high-toned! Such a singular honour from Haviland Dumaresq's daughter!

They sat and watched out the set together, Psyche seeing nothing, and Cyrus talking gaily enough to her about nothing in particular. Yet, she listened gratefully. The full-flowing murmur of his trivialities soothed her. Mr Vanrenen was always so kind and nice: she liked him so much for his simple good-nature.

As they sat there talking idly, Corona brought out a letter with an American stamp on it. Cyrus tore open the envelope and read its contents with a faint puckering of his eyebrows.

'Business slack?' Corona inquired with obvious interest.

'Well, the old man writes, the market's feverish,' Cyrus answered with a faint flush of ingenuous shame. He had never felt ashamed of pork in his life before—in Cincinnati, pork is as fashionable as cotton in Manchester or cutlery in Sheffield—but in Psyche's presence he was vaguely aware of something ludicrously commonplace about that Ohio staple. To hide his confusion he murmured once more—'East-bound freight-rates restored from Chicawgo.'

'Is that so?' Corona cried, with much meaning.

'That is so,' Cyrus replied; 'and what's more, Futures in lard are described as nervous.'

'You don't tell!' Corona murmured sympathetically. Like all Western girls she was a born gambler. She had ventured her own little pile on Futures.

'Yes, I do,' her brother responded: 'and there's a Corner in December ribs and sides, too: a very dangerous Corner. January opened at 160, and without once receding from that first figure, touched as high at times as 172. "The determination to carry the February squeeze through to the bitter end," Eeselstein says in his letter, "makes operators apprehensive of what may occur with deferred deliveries." It's awkward—very.'

'And what'll Mr Eeselstein do?' Corona asked, drawing a deep breath.

'Why, I guess the old man'll back the Fifth National Bank blind,' Cyrus answered, smiling. 'He's bound to go it with such a squeeze as that! It's neck or nothing.'

To Psyche, all this was Greek indeed. Squeezes, and Futures, and Corners, and so forth, meant less than nothing. They were talking, to her, a foreign language. Yet she felt vaguely for

all that she was *de trop* just then. She rose, and tried to grope her way blindly to the house. Cyrus, rising at the same moment, led her up to her father at the door of the *pension*. 'Thank you,' she said, turning round to him with rising tears in her eyes. She was really grateful for all these little kindnesses. Cyrus opened the door and ushered her in with a bending head. He looked after her, admiringly, as she felt her way with outstretched hands through the darkling passages. Poor little lady! He would do anything to serve her. She was Haviland Dumaresq's daughter—and so very high-toned!

On the steps, Sirena met him with a hushed face. 'Cy,' she said, looking up at him, 'do you know what Mr Dumaresq told me just now? He told me you were a young man for whom he'd conceived quite a regard!—I assure you he said so.—And I think, Cy,' she went on after a short pause, 'you ought to accept this intimation, and make the best of your position with Psyche.'

Cyrus pondered. 'What'd Geraldine Maitland think?' he said at last, thoughtfully.

Sirena rose to the situation like a born diplomat. 'Why, Geraldine Maitland said to me to-day,' she answered, with deep wisdom, "'What a pity Psyche don't take a fancy to that dear fellow, your brother!'" That's exactly how she said it. And my advice to you is, go in and try for her, Cy. It's something, you know, to be Haviland Dumaresq's son-in-law.'

'They'd stare some in Cincinnati,' Cyrus admitted, stroking his nascent moustache reflectively.

'And you like her, you know, Cy,' his sister continued, returning to the charge and following up her advantage. 'You must allow you like her. I can see every day you like her better.'

'Well,' Cyrus admitted in an apologetic voice, 'it don't seem natural I shouldn't like her, either—being thrown together with her so much, and she so high-toned. Her very misfortunes make a man somehow feel like loving her. If it weren't for Geraldine Maitland!'

'Geraldine Maitland!' Sirena cried scornfully, interrupting him with a contemptuous twirl of her graceful fingers. 'Well, Cy, I'd have thought even you'd have seen Geraldine Maitland don't sit on the same rail with Psyche, anyway. And ever since Psyche came to the house, you've been getting to think more and more of Psyche, and less and less of Geraldine Maitland.'

'That's so, too,' Cyrus assented unreservedly after a moment's thought. 'That's good psychology, as Mr Dumaresq would say. It's no use crying for the moon, you see, Reeney. So I don't deny, one scale's been going up, and the other down, ever since Miss Dumaresq came here.'

'Very well, then,' Sirena said with an imperious air. 'Let 'em balance straight, and go ahead, Cyrus. Just you catch on to Psyche, now you've got the chance, and don't go crying over spilt milk any more with Geraldine Maitland.'

Her advice seemed wise. So for the next three months, accordingly, Cyrus Vanrenen was Psyche Dumaresq's most devoted slave. The simple-hearted, generous, whole-souled young American, having once taken her up, fell easily in love with her, if indeed he hadn't been more than half in

love with her already. He had really persuaded himself now—so blind is youth—that if Psyche could only love him in return, her eyesight would soon come all right again, as the doctors assured them. And for the next three months, with this object in view, he waited upon her as assiduously as her own shadow. As for Psyche, she, poor child, accepted his gentle squiring, all unconscious of its aim, yet not without gratitude. A hand to guide her was a comfort in these dark days; for Psyche herself never doubted now the terrible truth that the end of it all must be total blindness.

Yet when Sirena told Geraldine Maitland the result of her little plot upon Cyrus's heart—a plot already concocted between them in strict confidence—Geraldine's face, to her surprise, fell somewhat. She stifled a sigh, like a woman that she was (and therefore illogical), as if it hardly pleased her to hear that the lover she had taken such pains to shuffle off could give her up in favour of Psyche quite so readily.

(To be continued.)

### THE PRAIRIE DOG AS A PET.

ABOUT five years ago a couple of prairie dogs were brought over to our rural parish in the south of Scotland from Colman County, on the basin of the river Colorado, Western Texas. The surface of the prairie-lands in that quarter, which is now being occupied as large sheep-farms, is either nearly level or slightly undulating. In an extensive district, Santa Anna, the highest eminence, only reaches two or three hundred feet in height. The region is fairly open country, here and there a short scrub. It is a flowery land in spring, after which the grass grows high; and if drought set in, there is danger of it taking fire. The climate is so warm and salubrious—that for a great part of the year the shepherds can sleep out of doors with immunity. In this region the prairie dog is very numerous; nor is it much liked, for the holes it burrows often trip up the horseman at night. It is frequently to be seen sitting upright near its burrow, barking in its own way at the stranger. Then it bolts, tail quivering, headlong into its hole, turns itself, and peeps out as the wayfarer approaches, thus giving animation to an otherwise lonely region.

Our two prairie dogs were brought over to this country in boxes, and were far from being in good condition when delivered from the irksomeness of confinement. The house into which they were received as lodgers is a humble dwelling of two small apartments, close to the church and churchyard, and occupies the middle of a small row or hamlet. Their appearance was a subject of great curiosity, being somewhat like that of a squirrel, and somewhat like that of a water-rat. They were not so large as a rabbit; had short forelegs, small tails, no external ear, were pretty broad for their length, had long claws, and soft hair, short, and of a dull red colour, which changes to a gray hue. They were very playful with each other, and made excursions to the churchyard, the grass of which they

seemed to enjoy, plucking it out with their fore-paws, and then sitting eating with the greatest avidity that portion of the stem least coloured, nearest the root. At the end of a year the older of the two died. He was supposed to be two months old when first caught. Our remarks now mainly concern the younger and stronger one, Yap, which is still alive and lively, being now at least six years old.

The great trouble with them was to keep them from gnawing the mats, rugs, bed-hangings, and furniture of the kitchen in which they were located. For this purpose they required to be locked up at night. A strong box was procured, provided with a lid that could be locked down. A partition was made in the middle of the box with a hole in it, so as to give each an apartment. One side of the box was made of strong wire; and the wood of the other sides and of the lid lined with perforated zinc. A motley quantity of rags was procured, and they were allowed to make their own beds. It was observed that the stronger of the two mainly occupied himself in arranging the patches within the box, while the other carried them from the floor. An empty tea-chest containing some newspapers was also placed at their service through the day. This was set in the dark under the bed. To this day, Yap objects to newspapers, which he turns out, much preferring the woollen rags. A singular fact in regard to the arrangement of the particoloured patches may be noted. In arranging them, the brighter colours are always turned to the surface, and the red rags are more exposed to view than those of other colours. It takes Yap a long time to make up his bed; but he does it neatly, keeping a hole in the middle, into which he plunges and covers himself well up. When tired, he goes to bed in the tea-chest for an hour or so throughout the day, but likes to get into his strong box near the fire at evening. If the lid be closed, he becomes restless, scrapes at it, stands on his hindlegs, and plucks at the clothes of his friends. His time to go to bed, even when the days are long, is very nearly about the time of Texan sunset, seven or eight o'clock.

Although West Texas is a sheep-country, the shepherds employ no dogs; they trust to stone and sling. When a sheep inclines to bolt from the main flock, they dexterously throw a stone right before, which causes the runaway to back into the herd. The slinging is accompanied by shouting, and by-and-by the sheep understand the shout without the stone. This may account for the fact that Yap has never shown much timidity towards dogs. The dogs, on the other hand, generally bridle up, however loud and swift the assault, whenever they come near him, as if they noticed something uncanny. In Texas there are a few wolves, now getting very wary, and several rapacious birds, having far less fear of man than those in this country. Perhaps that is the reason why Yap is much more terrified for a crow than a dog, and runs quickly into the house if one or more alight in the tree opposite and begin to caw.

With regard to sounds, Yap is capricious, and can never endure that of a barrow passing, although no notice is taken of that of the church bell. His food is strictly vegetable and his diet

light. Dry oatmeal, a bit of oatmeal cake, and oats, are his favourite food. He likes milk, but can never be induced to take porridge. He does not object to fruit, and is particularly fond of almonds. The average temperature of this country being so much lower than that of Texas causes him to be extremely anxious of creeping close to the kitchen fire, where he sits close to the cat, which he fondles, bestowing on her many gentle strokes with his little paws. When out of doors, he is particularly fond of keeping close to the little bantam hen. Of the two persons with whom he resides he prefers the mistress to her husband. Nevertheless, the mistress having left for some time, he sat close to the feet of his male friend at night, and did not wish to go to bed until the master retired to his as far on as eleven o'clock; and, strange to say, when, after a few days' absence, the mistress arrived, it took her some time to regain his affections.

Although his ancestors never were domesticated, he seems capable of a certain amount of training. One strange peculiarity of both dogs was that they lacked the sense of vertical distance. When they got on a table, chair, or window-sill, they stepped from them and fell as if unaware, hurting their face and nose. When they attempted to leap from two chairs a bit apart, they would also miscalculate, and fall between them. They soon got over this, and judged the distance horizontally correctly; but it was a long time before Yap could do the same from a height. Now, however, experience has taught him this also, and he can leap from box to chair, from chair to bed, and *vice versa*, with the utmost precision. Perhaps the nearly level nature of their original habitat may have something to do with this blunt sense of vertical distance.

Yap has intelligence enough to notice any strange piece of furniture or utensil brought into the apartment, never being satisfied until he has smelled and examined it. Once when a new rug was put down before the fireplace to grace the ministerial annual visit, he sat down on it with great enjoyment. But when the old faded rug was again laid, resentment was shown, and he began to gnaw and tear it. The indomitable habit of gnawing is in the way of any of his kind being made a household pet. Even the perforated zinc of his strong box gave way before his incisors, and he succeeded in making a hole through the lid. Here, also, he has learned by experience; and if caught in the act of gnawing any household article, instantly stops, lest a hard word or a cuff should be administered.

He expresses his affection mainly by pressing gently with his teeth the hand of him he loves. If a stranger lay hand on him firmly, he shows no resentment; but should he touch him in a timid hesitating way, he is apt to give him a pinch. Yap, after his companion's death, grew much more timid about going out of doors, and never afterwards ventured as far as the churchyard in which the two together used to play.

During the last nine months Yap has fallen off considerably. He now weighs two pounds, is nine and a half inches in girth, and from the snout to the tip of the tail fifteen inches long. Within the last three months he has developed a taste for meat, which he begs for, holding up his forepaws, and prefers cooked to raw. In this

summer weather he gratifies his instinct, filling up holes with earth, and beating it in with his head as, in the wild state, his kind seal up rattlesnakes should they enter their funnel-like burrows.

## THE ROMANCE OF A SUMMER.

### CHAPTER IV.

JACK D'ARCY was a universal favourite, and in that respect he differed considerably from his chief friend, Oliver Westall, and closely resembled Humphrey Standish. Perhaps that was the reason why Humphrey singled him out from among all the other guests at Mr Campbell's shooting-box as the one whom he chose chiefly to honour with his society. However that might be, before they had been a week at Inverarran they were the closest of friends, and felt as if they had known each other all their lives.

'Odd thing, isn't it? how different some people's destinies are from what they ought to be,' said Mr D'Arcy one evening, as he and Humphrey sat talking together in his room after they had retired for the night. 'Some people, whom to look at you would say were born for happiness and prosperity, are just the unluckiest beggars on the face of the earth, and *vice versa*. There's a case in point,' he went on presently between the whiffs of his cigar, finding that Humphrey did not answer, 'in something my friend Westall told me in a letter the other day. He says there's an awfully charming girl staying in the hotel he is at—a perfect marvel of everything that's charming, according to him; indeed, if it weren't old Oliver, I should declare that he was in love with her himself. And now, this priceless paragon, this goddess in human form, is going to marry a wretched old foreign fellow—a Malay, or something of that kind—a chap whom everybody seems frightened of, and whom she herself, according to him, detests, or at anyrate does not care two pins about. Now, what the dickens does a handsome girl—one who could marry whom she chose and when she chose, want to go and tie herself for life to a man who isn't even an Englishman—or even a European, but a wretched Oriental, brimful, doubtless, of deceit and underhand ways? Pah! the thing makes me sick.' And he looked very much disgusted.

Humphrey did not say anything. He was thinking of Avic's mother.

'I only knew one Malay,' his friend resumed, 'and he was a scoundrel. An out-and-outer, I can tell you. His name was Mutwaneé, and I never had such a desire to see a fellow-creature hanged as when I was talking to him. He came over in the ship I came from the Cape in, at the beginning of this month—or, rather, it was the end of last. I shouldn't wonder if this were the same fellow,' he added, meditatively; 'and if so, I pity the girl. He has two or three wives already.'

It was growing too late for any more conversation just then; but the next morning, after breakfast, D'Arcy joined Humphrey on his way up-stairs.

'It's the queerest thing I've heard for long,' he cried, glancing at an open letter in his hand. 'You know that fellow Mutwaneé I was talking of last night. Well, it seems that he is the very fellow whom this Miss Sacharty is to marry. I wonder her people'—

'Who did you say the girl was?' interrupted Humphrey hoarsely, clutching as if for support to the balusters. 'Miss who?'

'Sacharty,' rejoined the other, startled by his voice and manner; then, catching sight of his white face, he added: 'Why, Standish, man, what's up? You look as if you were going to faint!'

But Humphrey by a supreme effort managed in a great degree to regain his self-composure. 'I'm all right,' he returned. 'But, come in here; I want to hear all I can about it.'

With a rueful thought of the shooting he would miss, Jack followed his friend into the deserted smoking-room and told him all he knew. It did not amount to very much after all, being merely the little scraps in Oliver Westall's letters; but it was enough to draw a low groan of horror from the startled and dismayed Humphrey.

'It is some fiendish plot of her father's,' he cried fiercely. 'Av—Miss Sacharty could never, never have consented to such a thing of her own free will!' Then, after a moment's pause, he went on more calmly: 'Does your friend say whether her aunt knows of it? Is she also in the game?'

'No,' returned D'Arcy, glancing at the letters in his hand; 'there is nothing about an aunt, only a note that the girl herself is a half-caste.—But if you know the aunt, you might be able, if not to stop the marriage at once, at least to delay it till she comes. And remember, I know for a fact that Mutwaneé has at least three or four other wives. There was a fellow on board who knew him very well, and I daresay we could get hold of him somehow as a witness. He knows all his past history.'

'Ah,' returned Humphrey gravely, 'I think then I'll go off to the nearest town and telegraph to Miss Marchmont—fortunately, I know her address—and then I shall be able to decide on my course of action. To-day is Thursday, so there is no time to be lost.' Then, after a moment's pause, he added apologetically: 'I'm afraid I've spoilt your day's sport for you, old fellow! What a nuisance you must think me! But you see—I know Miss Sacharty very well, and the thought of her danger!' He broke off abruptly and covered his face with his hands.

D'Arcy looked compassionately at him. 'Never mind the shooting, old man!' he returned with attempted levity. 'Those other chaps can't bring down all the partridges, you know. And I tell you what, I'll come down to the town with you; the walk will do me good!'

Humphrey pressed his hand gratefully, and hastily putting a few things into his travelling bag, in case of having to go to Strath Carron, he set off with his friend.

'We'd better stay here till the answer comes, I think,' remarked D'Arcy as they turned away from the telegraph office. 'There will be more chance of a speedy answer then.'

It was not until the afternoon that the reply came, however. Humphrey tore it open with



trembling fingers, scarcely daring to read the scrawl on the pink paper inside. D'Arcy impatiently looked over his shoulder.

'Come, cheer up, Standish!' he cried cheerily; 'the old lady's on your side at any rate!' And thus encouraged, Humphrey read the message, which ran as follows: 'Delay marriage. S. no power over A. Am starting directly. Rely on your help.'

'Well, now, as you've got your bag here, I think your best plan would be to go off at once to Strath Carron, and, armed with this warrant, to beard the lion in his den.' And D'Arcy set his face in the direction of the station as he spoke.

Humphrey followed him. 'Yes, that would be best,' he returned; 'there's no time to lose.'

There was no train to Strath Carron till eight o'clock. 'And you won't get in till latish, I should say, sir,' continued the station-master in reply to his anxious question. 'The quick trains are all in the forenoon.'

'What time will I get there if I go in the morning?' inquired Humphrey quickly.

'Well, sir, ye'd maybe get there about ten o'clock, if ye took the quarter to seven. That's the best train o' the day; it disna stop but twice on the road.'

'I think I'll wait for that,' said Humphrey, turning to his friend. 'I can't do any good arriving in the middle of the night.'

'It widna be before twelve o'clock,' put in the station-master by way of comment.

'And it might do harm,' continued the young man, not heeding the interruption, 'by putting them on their guard.'

D'Arcy acquiesced in the wisdom of this argument. 'Shall you stay in the town for the night, then?' he inquired as they left the station.

'Yes, I think so. It would be awkward coming in so early, wouldn't it? But I'll walk a bit of the road back with you.'

And they turned away together into the quiet high-road which led to Inverarann.

'It's awfully good of you to have helped me so!' cried Humphrey, when at length they parted. 'I should never have known about it if it hadn't been for you!'

'Pooh! my dear fellow, it was nothing,' returned the other, giving his hand a hearty shake. 'I hope I'm not such a monster as to see a girl sacrificed when I can help her.'

'Poor fellow!' he muttered to himself afterwards as he watched Humphrey's tall form fading away in the distance. 'He's very hard hit, and no mistake.'

The quarter-to-seven train amply justified the station-master's boast, and punctually at ten o'clock Humphrey stepped out on to the bare-looking station of Strath Carron. The hotel—there was only one of any repute in the place—was not far from the station, the porter said; and it was without much difficulty that he found himself at last at its door.

The waiter assured him that Miss Sacharty—he had not dared to ask for her father—was up-stairs; and up-stairs he accordingly went, and, motioning aside the obsequious waiter, entered the room before which he had stopped. Avice, who was seated in a low chair by the window,

raised her head listlessly as he entered; then seeing who it was who had thus invaded her solitude, she sprang up with a little cry of joy. 'Mr Standish!' she exclaimed, advancing quickly towards him—'Mr Standish!'

Humphrey noted with distress how white and fragile she had grown, and how hot was the little hand which he held so tenderly in his. 'Miss Sacharty!' he said sorrowfully, 'what have they been doing to you? You look like your own ghost!'

A sad little smile crossed her face. 'It is nothing,' she returned, with attempted lightness, 'nothing at all. I am quite well.'

'Quite well!' he echoed reproachfully. 'Why should you pretend to me, your old companion of so many delightful weeks, that you are quite well, with a face like that! I suppose next you will say you are quite happy!'

The girl's lip quivered at his words, but she determined to put a brave face on the matter. 'I ought to be,' she returned, her trembling voice belying the words. 'Don't you know that I'm engaged?'

'I have heard so,' he returned gravely; 'but I cannot and will not believe that it is by your own free will. Tell me truly, now, it is not so?' He looked at her eagerly, imploringly, but with a quiet steadfast faith in his own assertion that seemed for the time to nerve her enfeebled will.

'No,' she replied, in a low tone, so low that he could scarcely catch the words—'no, it is not by my own free will.'

'I knew it, I knew it!' he cried joyfully. 'But tell me, how could any one persuade you to take such a step?'

Slowly, bit by bit, with an effort which showed how strong was the influence Mutwanee had upon her, she told him the story of the past few weeks; and ere she ended, Humphrey had decided on his course of action.

'Is your father in?' he inquired abruptly, as she finished speaking. 'No? And Mr Mutwanee?'

'He is out too.'

'Good. Then don't let either of them know I'm here. Remember, whatever that fellow asks you about me, you are to tell him nothing. And be assured whatever happens I will save you!' With these words he left her, and went in search of Mrs Douglas, with whom he had a long and earnest conversation, at the end of which it was agreed that Humphrey should lie perdu in the town until the next day, and that he should allow the marriage to begin before he appeared to stop it. 'Otherwise, they may escape us yet,' he added oracularly.

There were not many people in the hotel who knew of the tragedy which was being enacted in their midst. Sacharty was very close about his private affairs, and Mutwanee had his own reasons for wishing to keep things quiet. The wedding was fixed for eleven o'clock, an hour when most of the visitors were at the baths; and when the time came there were few in the little church beyond the bride and bridegroom themselves. Of course Oliver Westall was there; he considered it his duty to 'see the last of that poor little girl'; and the Digby Brownes had also turned up; but beside them there was no one.

As they walked up the silent aisle, Mrs

Douglas noted how anxiously Avice's eyes glanced from side to side in search of Humphrey; and on pretence of arranging her collar, she managed to whisper: 'It will be all right—only trust.'

The girl answered by a grateful smile, and the ceremony began.

The clergyman, a nervous little man, had concluded the general exhortation, and was beginning the particular charge to the betrothed couple to declare if they knew of any lawful impediment to their marriage, when steps were heard coming quickly up the half-darkened aisle, and Humphrey's voice rang out clearly in Avice's ears and in those of all present: 'This marriage must not proceed.'

The words fell like a thunderbolt on all except Avice and Mrs Douglas, who had been in a measure prepared for them. The timid little clergyman dropped his book in terror and gazed at Humphrey, who was followed by two constables, much as a pigmy might look at a giant.

Sacharty was the first to recover himself. 'Must it not?' he inquired sneeringly; 'and why, pray?' Then, recognising Humphrey's face, he continued with exaggerated politeness: 'Perhaps, Mr Standish, you will be good enough to explain the reason of this most unwarrantable intrusion.'

Without deigning a reply, the young man turned to the clergyman. 'I come,' he said quietly, 'on behalf of Miss Sacharty's legal guardian, to stop this marriage as an iniquitous and illegal affair. This person'—indicating Mutwantee, who stood erect and defiant, evidently determined to brazen matters out as best he might—'this person is not a Christian, and has, as can be proved if necessary, several wives already in his own country.'

Timid little Mr Strachan looked horrified, and edged farther away from the foreigner.

Humphrey meanwhile had given his constables instructions to detain the two confederates, and then taking the trembling Avice by the hand, he led her away, leaving Oliver to take charge of Mrs Douglas.

But Mutwantee had no intention of submitting to his fate without a struggle. Twisting his supple form out of the detaining grasp of the constable, he drew a revolver from his inner pocket and levelled it full at his captor. The constable, quick as thought, sprang aside, and the contents of the chamber were lodged in the heart of the wretched Sacharty, who fell back without a groan. The other constable, thus released from guard, advanced swiftly towards the Malay, who was preparing for a second shot, and suddenly wrenching his weapon from his grasp, slipped a pair of handcuffs on him, and, assisted by his comrade, marched him off to the town prison, there to await his trial for murder and attempted bigamy.

It was with difficulty that Humphrey succeeded in conveying Avice back to the hotel, for the poor girl's nerves were so shaken by what she had gone through that she could hardly stand; and when at last they did gain the hotel hall, she looked so dreadfully ill that he was fain to relinquish her into the hands of Mrs Douglas, who insisted on sending her at once to bed.

As he stood watching her feebly mounting the stairs, Andrew touched his arm. 'Beg pardon,

sir,' he said; 'but there's a telegram come for you a while since;' and he handed him a salver with an ominous-looking envelope on it. Humphrey opened it hastily. It was from Jack D'Arcy. 'Aunt telegraphed, coming Strath Carron this morning about twelve.' It was then about a quarter to.

'Thank goodness!' he exclaimed, replacing the paper in its envelope—'thank goodness!' Then turning to Andrew he said hurriedly: 'Just tell Mrs Douglas that I am going to the station. I shall not be long.'

The waiter turned to execute his order, and he set off.

The train was late, as trains generally are when one wants them to be punctual, and it was fully a quarter past twelve ere it steamed into the station. There were very few passengers for Strath Carron, and Humphrey easily distinguished Miss Marchmont's spare form among them. She looked anxious and troubled; but a smile of genuine pleasure crossed her face as Humphrey greeted her. It changed to a look of alarm when he told her how dreadfully upset Avice was; and as soon as they reached the hotel she rushed up-stairs to see her darling niece. Avice was tossing about in a restless sleep, talking fast and almost incoherently as she turned from side to side. Mrs Douglas sat watching her with a troubled face, which, however, brightened as Miss Marchmont entered. She felt that she could now shift part at least of the responsibility of the nursing on to her.

And a heavy responsibility it was; for the doctor, whom Miss Marchmont had at once summoned in her alarm, declared that the girl was suffering from an acute attack of brain fever, induced by the excitement of the past few weeks, and he could not say what the end might be. 'She may recover,' he said doubtfully as he went down-stairs with Miss Marchmont the next day. 'Yes, with care she may recover; but I tell you frankly that I fear the worst.'

As a rule, Dr Forsyth was a hopeful individual, who preferred looking on the bright side of things, and thus his ominous words struck a chill into the hearts of Miss Marchmont and Humphrey. The latter was hanging about the hall, as he usually was, waiting for the slightest news of Avice; and he walked to the end of the road with the doctor when he departed, trying to win some crumb of comfort and hope from him.

When he returned, he found that a messenger had arrived from the police court with a polite request from the superintendent that he would come and speak to him on a matter of grave importance. Sick at heart he set off, and when he got there he learnt to his horror that Tehandar Mutwantee had been found dead in his cell that very morning. A post-mortem examination had been determined upon, as they could find no visible cause of his death. 'And I thought,' continued the official blandly, 'that you might know something of the deceased's habits, something that would give us a clue to work upon.'

But Humphrey knew nothing, and so was suffered to depart. A few days later he heard that the doctor's report had been 'Suicide by poison.' But he did not pay much heed to the matter, for both he and Miss Marchmont were

too much occupied with anxiety about Avice, who was hanging between life and death.

As the doctor had predicted, she had a hard fight for life; but at last, though as weak as a child, she was pronounced out of danger, and entered upon her long convalescence.

It was months before she regained anything like her old health and spirits, and for long the least allusion to the events of September upset her so terribly that the subject was never mentioned. At last one day, of her own accord, she asked where her father was; and then Miss Marchmont gently told her all, and how she need never fear Tehandar Mutwanee again. There was a short pause, and then she went on hesitatingly: 'What was that letter you talked about so often in your illness, Avice, one from me sanctioning your marriage?'

Avice looked puzzled for a moment, then she said: 'Oh yes! I remember.' And for the first time her aunt heard the story of the letter. 'I felt as if my last hope had gone then!' the girl added as Miss Marchmont stroked her wasted hand thoughtfully.

That lady did not speak for a few moments. 'I did not write it,' she said at length quietly. 'Kilmur must have forged it himself.'

And then, since he was dead, and they were loth to speak ill of him, the subject was dropped for ever. Humphrey coming in a little later, found Avice alone, for Miss Marchmont had suddenly recollected an errand she had in the town; and there, in the quiet light of the spring evening, he told her how he loved her; and hand in hand, the glory of the setting sun lighting their faces with its dying rays, they plighted the troth which was to last 'till death us do part.'

#### MEMORANDA OF AN INVALID.

How many of my readers are acquainted with the sensations of broken and resumed consciousness? On a certain Sunday I went to my usual place of worship, got out my books required in the service, took my seat in my usual corner, heard a small portion of the singing, reading of Scripture, and prayer; and then—I opened my eyes, and lo! I was lying on my back, and the kindly face of my old friend and trusted doctor was bending over me. I said: 'Where am I?' He said: 'In your own library.' All the interval was an absolute blank. Not mist, or fog, or dark night, but uncompromising nothingness, lasting some four hours.

I am told I answered questions on my way home in the ambulance. I am sure that those who say so would not tell fibs, and I can therefore say that something inside me answered the questions for me. I didn't, for I wasn't there. 'Master's out, but we expect him back shortly.' When master came back, he had to be introduced to a 'transmogrified' room. In every piece of furniture there seemed to be a kind of suppressed smile, as if it would say: 'How do you like the look of us now?' Then came the introduction to the trained nurse, a matter in which I hope every afflicted reader of mine will be as fortunate as I was. The comfort of being kindly attended to, and every want or medical direction observed, by a quiet, vigilant, cultivated, educated woman,

who knows exactly what to do and how to do it—one who can talk or read when required, or be quiet if she sees it best for her patient—is so great, that one parts with her at convalescence as a regretted friend. Such, at all events, was my lot. And such nurses should be treated in the family as they deserve. We have known wealthy families who have had no more sense of propriety than to send up scrappy meals to the nurse in a fashion likely to deprive her of what appetite she might possess after fulfilment of her disagreeable duties. In one case a visitor at the house was so disquieted by her host's behaviour that she bought a salt-cellar for the nurse, that condiment having been previously sent up-stairs, I believe, in a piece of paper. We will not enter so far into further particulars as to enable the family to be identified. For ourselves, the nurse had her meals with us, and was a pleasant guest.

Sometimes these trained nurses have to display considerable resolution and moral courage. Our nurse had been recently attending a young lady, whose father, an elderly and crotchety man, had peculiar doctrines about carpets and blinds. He would not have them himself, nor permit them to any one of his household. The patient was suffering from some pulmonary or bronchial complaint, and nurse asked for these needed protections from cold. The autocrat replied: 'I must inform you, nurse, it is a fixed rule of mine that no room in my house shall have carpets or blinds.' To which nurse sturdily replied: 'Then I would have you understand, sir, that I am going to break your fixed rules.' And break them she did, despite of the old fellow's persistence and hectoring.

The focus of the invalid's day is of course the doctor's visit. The patient has to be got ready for the doctor. His temperature is ascertained and registered. His face and hands are washed and his hair brushed by the kindly nurse in a way that pathetically stirs up very old recollections of a 'vanished hand,' a mother's hand, in the days of 'long long ago.' But in comes the doctor. 'Well, nurse, and what have you to tell me?' The sagacious nurse in reply tells the equally sagacious doctor as much as she thinks proper in the patient's hearing. The patient has got his little speech ready concerning his aches and pains and his queer sensations, real and illusive (and how queer they can be, when the nerves resolve to have a spree!). The patient, then, after the pulse has been allowed to tell its own story, tries to peep under the doctor's mask to find out what he thinks about the case. It is not well to question your medical man. If he has pleasant news to tell you, he will be quick enough to disburden himself of it. Take your medicine when nurse gives it. Do as you are told and be at rest, as far as your complaint will allow. That is your share.

There are topics of transcendent interest that we cannot dwell upon in a secular journal. We may perhaps be allowed to say that those who have looked far enough onward and upward to be prepared in health for the gravest issues of disease, will find, as the weary head sinks back on the pillow, too weary for thought, that they have already within them a priceless medicine, which cannot be bought at the chemist's, a

celestial anodyne like the blue sleep whereof we read in *Realmah*. It was 'a pulpy substance of the most beautiful blue colour,' the finest quality exhibiting a 'choice cerulean blue, which produced the most profound and absolute repose.' The author of *Friends in Council* forgets, however, to give us the address of the vendor of this heavenly jelly. I will venture to say it is only efficacious when home-made. But the recipe is well known to all my readers.

Another discovery that is made by a man who is dangerously ill is, that he is more kindly and generously thought of than he was at all aware. When a man is unmanned by illness and his nerves are jarred, he is allowed now and then to hide his face in his handkerchief, in the instinct of concealing a tear or a sob. And a very frequent incentive to this weakness arises when sickness and peril make breaches in the wall of British reserve, and the invalid is allowed to see a portion of what is usually relegated to the funeral day and the epitaph, and to learn that his depressing under-estimate of himself, and of his little utilities, services, and kindnesses, is—or seems at least, to some sincere friends—the whole of the truth.

Finally come convalescence and 'the garish light of day,' business, and care, and strife. But he has come within sight of the great Exit Gate, and he is never quite the same man again.

### THE MONTH:

#### SCIENCE AND ARTS.

DR HICKSON'S lecture upon Animal Life on Coral Reefs, delivered at the London Institution recently, dealt with a very fascinating subject. The lecturer asserted that marine animals of all kinds congregate in even greater abundance than is usual in tropical seas in the region that extends from the growing edge of a coral reef to a depth of some ten or fifteen fathoms beyond it. This may possibly be due to the fact that in this region there is plenty of light and heat, and a more or less constant temperature, while there is a plentiful food-supply brought in continually by tidal currents. Many of the animals are protected and concealed by pronounced marks and colours. Besides the numerous sponges, corals, molluscs, &c., which are attached to the reef, and which creep but slowly from point to point, there are numerous swimming animals capable of active movement in pursuit of prey, which must be considered as part of the fauna of the reef. It would seem clear that the animals are marked and coloured because they may match the brilliant surroundings of the reef, and most of these protective tints must be looked upon as concealment colours. A curious feature of this colouring is that the fish in which blue is the prevalent tint are more common in the shallow water, whilst those in deeper water are more frequently red and yellow. It is surmised from this that the blue colour may be a protection for the fish from air-breathing enemies, such as eagles, ospreys, and hawks, and as these depredators can only see their prey from above, the protective colour is confined to the upper portion of the fish. The red and yellow colours which adorn their lower

parts seem to be a protection from animals which approach the fish from the deeper waters beyond the reefs—sharks, perch, and other carnivorous creatures.

A Cold Saw for the purpose of sawing iron and steel has been invented by the General Manager of the Homestead Mills of Messrs Carnegie Brothers & Co., Pittsburgh. This saw is said to be a great success, and is creating much interest among metal-workers. The instrument consists of a circular saw of fine steel of hard temper, which is ground slightly thinner at its central portion, so as to clear a deep cut. Unlike the ordinary circular saw, it is not a fixture, but travels along towards and through the metal which it has to separate. The saw runs at slow speed in a tank of alkaline solution, made up of soap, soda, lard, oil, and water; and the greatest care is necessary in regard to the quality of the material of which this solution is compounded. The cold saw gives a clean cut, and is suitable for severing any thick masses of metal such as armour-plates, &c.

A novel prize competition has been inaugurated by the Dutch East India Government, who offer a prize of ten thousand guilders—about eight hundred and twenty pounds sterling—for the best method of packing salt applicable to that substance as sold in Dutch East India on account of the Government. This Government salt is prepared in much the same way as salt used to be procured in our own country—namely, by evaporation in open salt-pans. This product, after being dried for some time by the heat of the sun, remains in the warehouses for about twelve months. The product is a rough salt, which still has a tendency to absorb moisture from the air and to deliquesce. The method of packing for which the prize is offered must comprise a material which is not acted upon by the salt; and which must not contaminate it in any way, or confer upon it any peculiar taste or smell; at the same time it must possess sufficient firmness for the salt to be kept packed in it for at least two years. The boxes, or cases, must be constructed to hold a definite quantity of salt; and when once closed the contents must no longer be liable to deliquesce. Those who wish to compete for this prize should send in their answers to the Colonial Office at the Hague before the 1st of September next, and some time afterwards opportunity will be afforded to those offering likely solutions of the problem to take part in a competition, in which they can demonstrate the working of the plans which they advocate.

A curious accident recently happened at the terminal office of the New Anglo-French Telephone. One of the officials wishing to communicate with the London office, had rung the telephone bell, and had received the reply signal, when, as he took up the receivers and put them to his ears, he received a shock of electricity of such power that he was thrown backwards and rendered for the moment insensible. Similar accidents, it seems, have before occurred at this same telephone office, and they are attributed to lightning striking the telephone wire, either on the French coast, where the submarine cable ends, or at the terminus of the land wire in Paris. It is said that such accidents could easily be prevented if lightning-conductors were fixed at these points to protect the telephone cable.



For some time past swallows have been trained successfully to do the work of carrier-pigeons. M. Desbouvrie, who has been training these birds at Roubaix, believes that in case of war they would be ten times more useful than pigeons, as he finds them to be more intelligent; they also fly at a higher altitude, and are able to obtain their food while on the wing. In a recent experiment, fifteen of these birds were given absolute freedom, when they flew in different directions, and in about twenty minutes came back and perched on their trainer's hand.

At a recent meeting of the Royal Meteorological Society, Mr A. W. Clayden described some experiments which he had made during a London fog. These fogs, as we all know, were very prevalent in February last; and Mr Clayden spent some time in endeavouring to produce that curious phenomenon known as the Spectre of the Brocken. This, we need hardly mention, consists of the greatly magnified shadow of a man thrown upon mist by the action of the sun. The London fog provided the necessary misty atmosphere for Mr Clayden's experiments; and, in the absence of sun, he used a steady lime-light placed a few feet behind his head, whereupon his own shadow was projected on the fog. He not only made careful measurements of the size and distance of the ghost, but he actually succeeded in taking some photographs of the phenomenon.

At the same meeting of this Society, Mr Shelford Bidwell exhibited a new experiment which showed the effect of an electrical discharge upon the condensation of steam. In the first place, he cast the shadow of a small jet of steam upon a white wall, showing that this shadow was of feeble intensity, and neutral with regard to colour. But when the steam was electrified, the density of its shadow was at once much increased, and its colour became orange brown. This change is explained by the theory that the electrical discharge promotes coalescence of the minute particles of water contained in the vapour, and drops are thus formed which are large enough to abstract the more refrangible rays of light. It is thought possible that this explanation may account for the darkness which so generally accompanies the approach of a thunder-storm, as well as for the yellowness with which the atmosphere for the time seems contaminated.

Mr Edison has done so many wonderful things that it is perhaps natural that he should occasionally be credited with extraordinary exploits for which he is not in any way answerable. An account has recently been published in many of the papers of a machine attributed to the great inventor, and called the Kinetograph. This appears to be a combination between the phonograph and the photographic camera; and it is said that by its means it will be possible not only to register the various sounds at the performance of an opera, but also at the same time to procure a number of successive photographs of the action on the stage. These photographs—taken at the rate of forty-six per second—would be registered on a travelling band of sensitive pellicle, and afterwards, by means of a projecting apparatus of the magic-lantern kind, would be thrown successively on a screen, while at the same time the phonograph gave up its records.

In this way it is said that an entire operatic performance could be reproduced at any time for the delectation of the eye and ear. Those who know anything about the present capabilities of the phonograph and photographic apparatus will know that whatever may be possible when instruments can be perfected, there is at present no reason to believe that the Kinetograph or any other instrument like it can do what is described. In connection with this matter it may be stated that an instrument of this character was patented in England so long ago as 1889 under a somewhat similar name, and it may be the case that this contrivance gave rise to the report to which we have adverted.

A paper was lately read at the meeting of the Shipmasters' Society, London, by Captain Carmichael, on the subject of Liquid Fuel for Ocean Steamers. The lecturer remarked that the use of oil-fuel had not been much taken up by the owners of steamships, partly because coal was cheap, and partly because there was a timidity to adopt the liquid fuel. The advantages of the latter were many, the fires being completely under the control of the engineer on watch, who could regulate them so as to produce any pressure of steam required without being dependent on his firemen. But the great advantage in the use of oil was that the fuel could be carried in space that was now practically wasted—namely, the cellular bottoms of the ships or in the ballast tanks. The consumption of oil was, weight for weight, one-half that of coal; and the storage was both more compact and easier of access. Tank-steamers could always fuel a fleet of vessels even in heavy weather, and the oil is safe on board ship, and can be easily stored on shore. It greatly added to the cleanliness and the comfort of passenger ships, and it could be adapted to any existing boiler either afloat or ashore.

The *Lancet* lately called attention to the subject of mushrooms as food, and the risks of mistaking the poisonous kind of fungi for those which are edible. It points out that it is a matter of great importance that the public should be informed as far as possible of the main qualities which distinguish the two kinds of fungi. But to give a precise definition would be no simple matter. It may be said, however, that as a rule the poisonous fungi are associated with a high colour, scaly or spotted surface, and tough or watery flesh; while the edible species, on the other hand, are seldom highly coloured, scaly or spotted; are usually white or brownish, and brittle on fracture. The poisonous varieties, moreover, generally grow clustered on wet or shady ground; while the edible kinds grow in the open, and generally in dry pastures. As a general rule, those fungi which have a bitter taste, or which burn the throat, or yield a pungent milk, as well as those which on bruising assume various tints, ought to be avoided. The note concludes with the caution that all plants of this class readily undergo decomposition, and should, therefore, in any case be eaten as fresh as possible.

The question, What is the state of the interior of the earth? has always been a fascinating one, which geology has only partly answered for us. Our knowledge of this subject may possibly be increased by a boring which is now being made

at Wheeling, West Virginia. It seems that a well has been driven there to a depth of over four thousand feet, the object being the discovery of petroleum or natural gas. During this boring, a dozen thick veins of coal have been passed, while both petroleum and gas have been struck but not in paying quantities. Gold quartz, iron ore, and other minerals have also been brought to the surface. Great interest has been taken in this boring by the officers of the Geological Survey at Washington, and the boring is to be continued under present auspices until it reaches to the depth of one mile. After this, the Government will take up the work, and the drilling will be continued into the earth as far as practicable, not for the procuring of any particular natural product, but for scientific purposes, and in order to ascertain the thermo-metric and magno-metric conditions.

It is well known that many substances have the property of phosphorescence after exposure to sunlight, and M. Becquerel, the great French scientist, who lately died, made a study of this interesting subject, and gave a list of substances which showed this remarkable property. But as early as the seventeenth century, Robert Boyle called attention to the fact that a diamond will phosphoresce simply by the heat of the hand, and that it will emit light on being rubbed. Some recent experiments made by Mr Kunz, a well-known expert in diamonds in New York, show that all diamonds will emit light when rubbed in the dark on cloth or metal; and it is believed that this property may prove of great value in distinguishing between the true diamond and other stones which imitate it. It is pointed out that the phenomenon is evidently not of an electrical nature, or it would not show itself when the stone is rubbed on metal.

A year or two ago, iridescent glass was commonly seen in our shops, and was welcomed as an agreeable novelty; but in reality there is little novelty about these colours on glass, for if we examine the specimens of ancient glass which are to be found in our various museums, we see that the material is frequently more iridescent than in specimens of modern manufacture. Mr G. M. Hopkins has made a microscopical examination of some of these ancient glasses, and has described and illustrated the results he obtained in a recent number of the *Scientific American*. The examination showed that the surface of the glass is covered with extremely thin transparent laminae formed by matter which has been gradually dissolved from the glass itself. These films are so thin as to float in the air when detached from the surface of the glass, and the colour is produced by interference due to reflections from their front and rear surfaces, by exactly the same law as causes a thin film of oil on water or a film of air between two plates of glass (Newton's rings) to give similar vivid tints.

A French scientific paper describes a platinum mirror which has the peculiar quality of both transmitting and reflecting light, and a formula is given by which the platinum solution for deposition on the glass can be prepared. A mirror of this kind placed in the panel of a door will light up a corridor or dark room,

on the other side forming a mirror; so that any one standing on the platinised side can see through the glass without being himself seen.

That compound of collodion and camphor which is called celluloid is now used for a great many purposes, its most recent employment being, perhaps, for making flexible films upon which photographic negatives can be taken instead of upon glass. It is said that an Austrian chemist has recently discovered a substitute for it, called Hyaline, but which does not possess its inflammable quality. The new material is described as being transparent, tenacious, grainless, and without smell; and it may be drawn into threads or rolled into films. It is said to be composed of different gums, resins, oil of turpentine, and gun-cotton.

The Photographic Society of Great Britain lately organised at their rooms in London a small but very interesting Exhibition. This consisted of specimens of prints in colours, illustrative of the application of photography to chromo-lithography and other processes. The specimens shown did not profess to be anything but examples of the methods with which photography can be wedded to colour by mechanical means, and they may be described as showing the nearest approach—that is possible under existing conditions—to the solution of the problem of photography in colours. Many of the examples shown were equal in effect to fine water-colour paintings; and it may be added that the prices asked for them indicated that the process of manufacture must be both complicated and expensive.

Until we remember the vast extent of Australia, which is twenty-six times the size of Great Britain and Ireland, it is difficult to realise that a large portion of the island remains blank so far as exploration is concerned. This is of course principally due to the circumstance that the central part of the island is to a great extent waterless and sterile. An important expedition was organised in April last to explore thoroughly the unknown regions of the country, and we may therefore hope that the geographical blanks may soon be filled up. Great results are anticipated from this expedition, which has for its leader a well-known Australian explorer, Mr David Lindsay. The expedition includes forty-four camels with Afghan drivers and a native guide. A recent number of the *Proceedings of the Royal Geographical Society* states that the land to be explored mostly lies to the west of the overland telegraph line. One is a tract of country thirteen hundred miles long by three hundred and fifty broad; another measures nine hundred miles in length by two hundred in width; and a third, in a more northerly direction, is a district four hundred miles by three hundred, lying between the telegraph line and the Victoria River.

It is stated that in certain parts of Hankow there is no regular coinage, and that commerce generally is in a most primitive condition. Silver is used as a medium of exchange in the large towns, and for this purpose is melted into lumps weighing about seventy ounces each, the purity being of variable quality. A certain amount of copper coin is current; but its great weight limits its use, and the credit of the native bankers

is not sufficiently established to give any extended currency to notes issued by them. Under these circumstances, opium is found a convenient material in facilitating the exchange of commodities, although pure barter prevails to some extent. The opium has the advantage of being light and portable, easily divided into small pieces representing different values, while at the same time it is universally in demand.

For many years past a register has been kept at the Royal Observatory, Greenwich, of earth-currents. Registration is effected by means of reflecting galvanometers which cast pencils of light upon a sensitive photographic surface covering a revolving cylinder. Within recent months, certain variations have been noted which could not at first be accounted for, but which are now attributed to the working of the electrical railway between London Bridge and Stool well, a line three miles in length. It is found that the time of disturbance of the earth-currents agrees closely with the hours fixed for the runnings of the trains. It is noteworthy that this source of electrical disturbance is about six miles distant from the Greenwich Observatory.

### TOO LATE.

THE barque *Eagle* lay in the London Docks, taking in the last of her cargo and getting ready for sea. It was mid-day, and a pleasant lull had followed the din and turmoil of the morning. The huge steam cranes on the quay-side were at a standstill, their suppressed vitality showing itself in little puffs of steam that escaped with a hissing noise from the safety-valves. The ring of the calking hammer was hushed for a while. Stevedores, riggers, painters, and carpenters had gone ashore to dinner, and the half-dozen hands left aboard were gathered for the same purpose in a snug little cabin on the maindeck just forward of the charthouse. Ben, the sailmaker, in his canvas jacket, was a prominent member of the group. He was a man in the prime of life, with a pleasant look on his sunburnt face. His heart and soul were in his calling, for his experience dated from boyhood, and he had a way of telling things that was racy of salt water.

The conversation had turned from the business in hand to the latest bit of shipping news, the loss of a well-known London trader, that had that morning been posted at Lloyd's as missing. Many were the reminiscences brought up by first one and then another touching the skipper and crew of the ill-fated vessel.

'D'ye think there's any chance that some of 'em may ha' bin picked up?' asked one.

'No, I don't,' answered Ben, 'and that's the truth. I'm afeard it's the old story of death in an open boat, if any of them got away from her at all. And that reminds me of something that happened about two years ago, which maybe none of you have ever heard, but which is as true as we're a-sittin' here in this cabin.'

I shipped (said Ben) from the port of Hull

aboard the *Queen of Kent* for a round voyage to Hong-kong. She was one of the 'Bell' Line, and a smarter craft I never wish to sail aboard of. She was well found too, gear, stores, and everything. Well, we made a fast passage out, with fair weather; but because we wanted to be first home, from the time we dropped the pilot until we crossed the line it was altogether different. For days at a time we lived in our oilskins, you might say; the hatches were battened down, and the fo'c'sle was awash. South'ard of the Cape we ran into the worst gale I think I was ever in in my life; and I'm sure o' this, that not many a craft would ha' lived through it. For three days we were hove-to under close-reefed tops'ls, with the wind howling and roaring through the riggins' till it seemed as if every stick must go, and the seas tumblin' over the fo'c'sle and quarterdeck as if they meant tearin' the craft plank from plank. However, she came through it with no worse loss than a set of tops'ls and courses. After that we had a brief spell of better weather; the sea dropped, and the skies cleared, and we were able to make a bit more sail. Well, just about that time, we were washin' decks one mornin' at daybreak, when the second mate, who had the mornin' watch, sings out to one of the lads: 'Go below and fetch the glasses out of my cabin.' Away he goes, and presently comes up with a pair o' these here opera-glass things.

We didn't take much notice o' this, for we thought perhaps he'd sighted a sail in the distance. But after a long look ahead, he calls out again: 'Bo'sun, just take a look through these and tell me if you can see anything ahead yonder. Wait till she dips again! Now! about two points off the weather-bow, low down on the water.—What do you make of it?'

'I see somethin' away there, sure enough,' answers the bo'sun after a pause, 'and looks as if it were about midway between the bow of the ship and the horizon; but I can't rightly make it out, sir, with these. I'll go aloft and take a look round.'

In less than five minutes his voice came from the foretopmast crossrees: 'Below there!'

'Ay! ay!' responded the mate.

'That's a ship's boat ahead there, sir, from what I can make of it; but it ain't no bigger than a man's hand from here,' reports the bo'sun.

'So I thought,' was the mate's reply. 'All right; that'll do.' Then glancing at the canvas aloft, he muttered an oath. 'Confound the wind; it's dying away altogether now.'

And so it was; and by the time the sun had been above the horizon for an hour, there wasn't breeze enough to lift the leech of the royals, and the lower sails beat against the masts and riggins' at every roll of the vessel; for though the surface was like a lookin'-glass, there was a bit o' a swell on that might ha' bin a reminder of some of the heavy weather we'd bin havin', or it might mean a bit of a breeze again before nightfall. Anyway, there we lay with the tacks and sheets hangin' in festoons over the side, and a stretch of blue water lyin' between us and yonder speck, that had got to be covered somehow.

As you may guess, we were all agog at this news, and not a few of the watch below turned out to have a peep over the weather bulwarks. Some said they could see her, or made out that

they could; but for my part, when I came to look, I couldn't for the life o' me make out her whereabouts. But there was no doubt about it, she was there, and maybe half-a-dozen poor wretches aboard of her, wonderin' whether the big ship saw them, or was going to leave them to their fate.

In the meantime the mate had gone below and roused out the skipper, who came on deck lookin' sleepy and not over good-tempered. He had a look through the glasses, and, my word, you never saw such a change in a man all at once. He was wide awake in a moment, takes a turn or two up and down the deck, glances sharply aloft at the idle canvas, and then has a careful look all round the horizon, as if looking for the wind; but never so much as a breath came to his aid. A few words with the mate, and his voice rings out over the deck: 'Clear away the starboard lifeboat.' A dozen hands spring forward to execute the order; and in less time than it takes me to tell you, lads, the lashings were cut and the boat swung over the side.

'Lower away easy there,' comes the next order. —'Now, Mr East, take half-a-dozen men with you, and make the best of your way to yonder boat, and let us know whether there's any one living or dead aboard of her; but don't be longer than you can help, for I believe the breeze'll freshen again soon, and we don't want to lose a day.—Bo'sun, pipe the hands to shorten sail, and clew up your fore and main sail.'

You may be sure I did not want to be asked to form one of that boat's crew. There was a bit of a scramble; but I was the first to drop into her. The number was soon made up; and in a few moments we had cast off, and were pulling in the direction of the derelict.

From her royal masthead to her water-line, our ship looked a picture as we pulled away from her; and the voices of those left aboard, as they bent to the ropes, drifted cheerily over the sea. It was a stiffish pull, I can tell you, for the sun had got a bit o' power by that time, and made things warm all round, and the distance seemed twice as long, for every man was on the tiptoe of excitement, and anxious to get alongside, and kept lookin' over his shoulder to see what way we were makin'. The mate he says nothin' but a few words of encouragement every now and again; but at last he stands up, grasping the tiller ropes in his hand, and with his eyes fixed on the boat we were makin' for. Every line of his face was workin' with excitement; but a moment afterwards, he turned the colour o' the canvas, and said in a husky voice that weren't a bit like his own: 'We're too late, lads! Easy all! Stand by for'ard there with the boat-hook.' And the next moment we were alongside the stranger, to find—a few rags of canvas hanging from a mast, an empty water-breaker awash in the bottom, some pieces of sodden leather, a pencil-case, and a human figure huddled in the stern sheets—dead.

Well, mates, we took the boat in tow and made back for our own craft. The breeze had sprung up at last, and she was coming down to us like a yacht, hand over hand, with every line of her canvas filled, and it was a pretty sight to see her hove-to. There was a row of anxious faces lining the bulwarks as we pulled alongside; but they

disappeared one by one when they saw that we had done no good. That night we stood round the gangway bareheaded while the skipper said the last words over the poor fellow.

Then we made sail once more; and never from that day to this has it ever been discovered to what ship or to what port that boat belonged.

### THE LADY SORROW.

THE Lady Sorrow came to me;  
Her lips were wan, her pace was slow;  
She carried rue and rosemary,  
And sad her accents were, and low.

The wind rose in a gust of sighs,  
The clouds broke in a storm of tears;  
And she too wept, for in her eyes  
Were met the woes of many years.

I rose to meet her; and I knew  
In that dark hour she brought my doom:  
'I know thee by thy gathered rue,  
I ask not wherefore thou art come.'

She took my hand; her palm was chill;  
She led me on through thorns and mire,  
By swampy fen and windy hill,  
O'er fields of snow and lakes of fire.

At last she brought me to a wood;  
The boughs grew thick, no light came through;  
She stayed and kissed me as I stood;  
She passed before I saw or knew.

And, with that chrim upon my brow,  
Forward I went: the dark grew light;  
By firm wide paths I journeyed now,  
With snowdrops sown and aconite.

And out into the busy world  
I pressed with eager heart and feet;  
From cottage roofs the thin smoke curled;  
The cock crew loud, the flowers bloomed sweet.

And every worker that I met  
Smiled back in answering sympathy—  
'Her sign is on thy forehead set;  
Who comes to all has been with thee.'

### \* \* TO CONTRIBUTORS.

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Printed and Published by W. & R. CHAMBERS, Limited,  
47 Paternoster Row, LONDON; and EDINBURGH.